

AMENDMENT TO CLAIMS

1-2. (Canceled)

3. (Currently amended) A solid state imaging apparatus which includes a plurality of pixels two-dimensionally arranged in the row direction and the column direction and including respective color filters and in which colors of the color filters are two-dimensionally arranged so that colors in two rows or two columns as a unit repeatedly appear,

the apparatus comprising arranging means for grouping the plurality of pixels into at least two pixel addition groups each of which consists of $r \times s$ pixels included in an area of r rows (where $r = 6n + 2$, n is a natural number) and s columns (where $s = 6m + 2$, m is a natural number) and grouping the $r \times s$ pixels into pixel mixture units each of which consists of $p \times q$ pixels included in an area of p rows (where $p = 4n + 1$, n is a natural number) and q columns (where $q = 4m + 1$, m is a natural number), setting pixels constituting each of the pixel mixture units and located in even-numbered rows and columns from a center pixel at a center in the row and column directions so as to include color filters of the same color, and two-dimensionally arranging the pixel mixture units so that each of the pixel mixture units is shifted by $(p + 1)/2$ pixels in the row direction and by $(q + 1)/2$ pixels in the column direction and each of the pixel mixture units subsequently overlaps with associated ones of the pixel mixture units,

wherein pixels in two rows or two columns of each pixel addition group overlap with associated pixels in two rows or two columns of an associated pixel addition group, and

wherein signal mixture means for mixing pixel signals from ones of the pixels constituting each of the pixel mixture units which include color filters of the same color is provided in each of the pixel mixture units.

4. (New) The solid state imaging apparatus of claim 3, wherein the signal mixture means mixes a pixel signal of a pixel located at a center of each pixel mixture unit and a plurality of pixel signals generated in pixels located on the periphery of each pixel mixture unit.

5. (New) The solid state imaging apparatus of claim 3, wherein the center of gravity of a mixture signal obtained by mixing the plurality of pixel signals is located so as to match to the center of each pixel mixture unit, and the center of gravity of the mixture signal is arranged equally and two-dimensionally.

6. (New) The solid state imaging apparatus of claim 3, wherein each pixel addition group is comprised of sixty four pixels, and each pixel mixture unit is comprised of twenty five pixels.